

Developing Device-Optimizing Wireless Apps Using XML & Java

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Summary of Presentation:

Going mobile is a top priority for most companies. Despite the hype surrounding wireless, the implementation process has been met with disappointment and surprise. During this session iConverse's chief technology officer, Tim Rochford, and vice president of engineering, Chris McGrath, will not only detail the business benefits of a mobile strategy by zooming in on a mobile workforce but also tread into technical waters by explaining the current methods that corporate developers use to create content for an array of mobile devices. These speakers will cite statistics from leading IT research firms about the growing number of mobile workers. They will also present case studies showing how various verticals are reaping the benefits of a mobile workforce and how to determine ROI. The second half of their presentation focuses on the technical aspects: wireless pitfalls and technical challenges. Everything from wireless device usability and performance challenges to network performance issues will be discussed. Rochford and McGrath also will delve into how mitigate these pitfalls and challenges. The center of this discussion will focus on the best and worst methods of creating mobile applications: screen scraping/transcoding, proprietary technology and Parallel Publishing. They will detail how developers use a mobile application development environment to create data (text and images) and speech applications. A variety of languages and protocols — XML, Java, XSL, VoiceXML, WSDL, SOAP, etc. — will be highlighted. How to connect to numerous data sources, leverage IT infrastructures and in-house developer skill sets will be covered. Lastly, the speakers will offer a checklist of what a mobile application platform should include.

1. Benefits attendees will derive from this presentation:

- Discover the business benefits of a mobile strategy
- Gain awareness of the pervasive myths surrounding the wireless implementation process
- Learn the different methods (i.e., transcoding, proprietary markup and Parallel Publishing) of building wireless applications and the languages involved
- Leveraging a businesses' existing IT infrastructures using "connectors"

Outline for “Developing Device-Optimizing Wireless Apps Using XML & Java”

I. Business case for m-powering a workforce

- Statistics from leading IT research firms about the growing numbers of mobile workers: GartnerGroup, IDC, META Research and Forrester Research

II. Case studies from various verticals showing how a mobile workforce — with an emphasis on sales — adding substantial value

- Manufacturing
- Field force
- Insurance
- Pharmaceuticals

III. ROI statistics

- Basis for calculating ROI:
 - Decreasing costs
 1. Improving productivity
 2. Streamlining processes
 3. Reducing call-center volumes
 4. Enhancing morale and retention
 - Increasing revenue
 1. Generating sales
 2. Improving customer satisfaction
 3. Enhancing cash flow

IV. Steps to m-powering a mobile workforce. A technology wish list:

- Seamless online/offline and synching capabilities
- Natural-language speech interface existing equipment — don't want to purchase new hardware
- Leverage developers' skill sets and knowledge — use open standards and languages they know
- Have new wireless technologies integrate with all mobile devices
- Provide users with the ability to interact with real-time data and information should be easy to read, not truncated

V. Wireless pitfalls and technical challenges:

- Usability and performance challenges
 - Devices are different: size, protocols, browsers, scrolling
- WAP phones: Ergonomically inconvenient for anything other than simple text commands
- Network performance
 - Low data rates (9600 baud typical)
- Palm.net service is an example

- Unpredictable network latency (more important)
- Latency = the time required for the network to respond to data and commands that have been transferred

VI. Mitigating the pitfalls/challenges:

- Form factors vary
 - Design should conform/leverage the form factor
 - Behavior should be consistent across designs
 - Need an easy way to vary the interaction for different devices!
 - Sales personnel, for instance, are good talkers – speech is a natural!
- Network performance
 - Devices must be “spoon fed” the right amount of info
 - Must recover from network drops
 - Must be able to continue work when not in coverage
 - Requires management of content delivery, session management and offline support
- Access to enterprise information systems
 - Need to connect to all different kinds of information systems
 - Access must be robust, reliable and secure
 - Need to be able to read and change information
 - Need connections families of connectors and adaptor:
 1. To SQL databases
 2. To business logic components
 3. To XML/HTML servers
 4. To message queues
 5. To directories
 6. To instant messaging, email and alerts

VII. Methods of how developers create mobile content:

- Screen scraping/transcoding
- Proprietary language
- Parallel Publishing
 - Other solutions: hard to customize
 - Unique, optimized application for each device
 - Benefit: richer user experience

VIII. Mobile application development platform requirements:

- Access to data, enterprise applications: back-end databases, legacy systems, CRM, SFA, FFA applications, Internet/intranet/extranet
- Leverage IT infrastructure
 - Enterprise connectors: Siebel, SAP, etc.
 - Application integration technology: HTML, EBJ/COM, SOAP, WSDL, XML, SQL

- J2EE application server platform technology: Java, JSP, XML, XSL
- Visual data, logic and content tools: intelligent way to do layout
- Drag-and-drop tools: customize content with mouse
- Easy to maintain divergences: devices, application flow
- Automatic device optimized application publishing: every WAP browser, every HTML browser variant
- Seamless online/offline and synching capabilities
- Data interface: text and images
- Natural-language speech interface
- Fast time to market
- Low cost to update and manage

For the final work book please contact Christopher Leary at cleary@iconverse.com